

CLAIMS

What is claimed is:

[c1] 1. A system comprising:
at least one Session Initiation Protocol (SIP) header containing information derived at least in part from an over-the-air (OTA) protocol message from a wireless communication device; and
at least one telephony infrastructure component receiving the information for use thereof in establishing communication with the wireless communication device.

[c2] 2. The system of Claim 1, wherein the OTA protocol message is a code division multiple access (CDMA) initiation request message.

[c3] 3. The system of Claim 2, wherein the information represents CDMA call set-up parameters.

[c4] 4. The system of Claim 3, wherein the parameters are related to the OTA protocol and are not related to voice over Internet Protocol (VOIP) communication within the infrastructure.

[c5] 5. The system of Claim 4, wherein the information includes at least one station classmark.

[c6] 6. The system of Claim 5, wherein the classmark represents at least wireless telephone power.

[c7] 7. The system of Claim 4, wherein the information represents whether a signalling encryption is supported by the wireless communication device.

[c8] 8. The system of Claim 4, wherein the information represents MOB_TERM status of the wireless communication device.

[c9] 9. The system of Claim 1, wherein the header is part of an SIP Invite Request message.

[c10] 10. The system of Claim 1, wherein the header is part of an SIP Register Request.

[c11] 11. The system of Claim 1, wherein the header is part of an SIP message from a virtual IP endpoint, and the information represents communication from a non-IP enabled CDMA communication device.

[c12] 12. A method for facilitating communication between a wireless communication device transmitting information using an over-the-air (OTA) protocol and a telephony infrastructure using IP protocol to communicate information within the infrastructure, comprising:
adding data in at least one IP message header representing at least one OTA network parameter.

[c13] 13. The method of Claim 12, wherein the parameter is related to the OTA protocol but not to voice over IP (VOIP) protocol used within the infrastructure.

[c14] 14. The method of Claim 12, wherein the parameter includes a station classmark.

[c15] 15. The method of Claim 14, wherein the classmark represents at least wireless telephone power.

[c16] 16. The method of Claim 12, wherein the parameter represents whether a signalling message encryption is supported.

[c17] 17. The method of Claim 12, wherein the parameter includes a MOB_TERM status.

[c18] 18. The method of Claim 12, wherein the message header is a portion of a Session Initiation Protocol (SIP) Invite Request message.

[c19] 19. The method of Claim 12, wherein the message header is a portion of a Session Initiation Protocol (SIP) Register Request message.

[c20] 20. The method of Claim 12, wherein the OTA protocol is a CDMA protocol.

[c21] 21. A wireless communication device infrastructure transmitting information internally to the infrastructure using Internet Protocol (IP) messages, at least one message being sent from a virtual IP endpoint within the infrastructure and representing communication from a wireless communication device transmitting information using an over-the-air (OTA) protocol different from IP.

[c22] 22. The infrastructure of Claim 21, wherein the information is transmitted in at least one header of at least one session initiation protocol (SIP) message.

[c23] 23. The infrastructure of Claim 22, wherein the communication from the wireless communication device is transmitted in an OTA protocol message.

[c24] 24. The infrastructure of Claim 23, wherein the OTA protocol message is a code division multiple access (CDMA) initiation request message.

[c25] 25. The infrastructure of Claim 22, wherein the information represents CDMA call set-up parameters.

[c26] 26. The infrastructure of Claim 25, wherein the parameters are related to the OTA protocol and are not related to voice over Internet Protocol (VOIP) communication within the infrastructure.

[c27] 27. The infrastructure of Claim 25, wherein the information includes at least one station classmark.

[c28] 28. The infrastructure of Claim 27, wherein the classmark represents wireless telephone power.

[c29] 29. The infrastructure of Claim 21, wherein the information represents whether a signalling encryption is supported by the wireless communication device.

[c30] 30. The infrastructure of Claim 21, wherein the information represents MOB_TERM status of the wireless communication device.

[c31] 31. The infrastructure of Claim 22, wherein the header is part of an SIP Invite Request message.

[c32] 32. The infrastructure of Claim 22, wherein the header is part of an SIP Register Request.

[c33] 33. The infrastructure of Claim 22, wherein the header is part of an SIP message from a virtual IP endpoint, and the information represents communication from a non-IP enabled CDMA communication device.

[c34] 34. A method, comprising:
using extended session initiation protocol (SIP) headers to transmit over-the-air (OTA) protocol parameters within an infrastructure using at least one voice over Internet Protocol (VOIP), such that a protocol other than the VOIP need not be used within the infrastructure to effect call set-up between a wireless communication device and another communication device via the infrastructure.

[c35] 35. The method of Claim 34, wherein the OTA protocol is code division multiple access (CDMA).

[c36] 36. The method of Claim 34, wherein the parameters include a station classmark.

[c37] 37. The method of Claim 36, wherein the classmark represents telephone power.

[c38] 38. The method of Claim 34, wherein the parameters represent whether a signalling message encryption is supported.

[c39] 39. The method of Claim 34, wherein the parameters include a MOB_TERM status.

[c40] 40. The method of Claim 34, wherein the header is a portion of a Session Initiation Protocol (SIP) Invite Request message.

[c41] 41. The method of Claim 34, wherein the header is a portion of a Session Initiation Protocol (SIP) Register Request message.

[c42] 42. The infrastructure of Claim 22, wherein the header includes a "from" line having a uniform resource locator (URL) derived at least in part from a communication device number of the wireless communication device.

[c43] 43. The system of Claim 1, wherein the header includes a "from" line having a uniform resource locator (URL) derived at least in part from a communication device number of the wireless communication device.

[c44] 44. The method of Claim 12, wherein the header includes a "from" line having a uniform resource locator (URL) derived at least in part from a communication device number of the wireless communication device.

[c45] 45. The method of Claim 34, wherein a header includes a "from" line having a uniform resource locator (URL) derived at least in part from a telephone number of the wireless communication device.

[c46] 46. The system of Claim 1, wherein the SIP header is an SIP Content Disposition header having defined types corresponding to OTA parameters.

[c47] 47. The system of Claim 1, wherein the header includes a short message service (SMS) media type indicating that a message body contains OTA SMS data.

[c48] 48. The system of Claim 1, wherein the SIP header is an SIP Invite header, and the header includes an email media type indicating that a message body contains OTA email text data.

[c49] 49. The method of Claim 12, wherein the header is an SIP Content Disposition header having defined types corresponding to OTA parameters.

[c50] 50. The method of Claim 12, wherein the header includes a short message service (SMS) media type indicating that a message body contains OTA SMS data.

[c51] 51. The method of Claim 12, wherein the header is an SIP Invite header, and the header includes an email media type indicating that a message body contains OTA email text data.

[c52] 52. The infrastructure of Claim 22, wherein the header is an SIP Content Disposition header having defined types corresponding to OTA parameters.

[c53] 53. The infrastructure of Claim 22, wherein the header includes a short message service (SMS) media type indicating that a message body contains OTA SMS data.

[c54] 54. The infrastructure of Claim 22, wherein the header is an SIP Invite header, and the header includes an email media type indicating that a message body contains OTA email text data.

[c55] 55. The method of Claim 34, wherein the header is an SIP Content Disposition header having defined types corresponding to OTA parameters.

[c56] 56. The method of Claim 34, wherein the header includes a short message service (SMS) media type indicating that a message body contains OTA SMS data.

[c57] 57. The method of Claim 34, wherein the header is an SIP Invite header, and the header includes an email media type indicating that a message body contains OTA email text data.

[c58] 58. The method of Claim 18, comprising:
sending a first SIP Invite message containing a full OTA address of an originating wireless endpoint;
receiving a destination address in response thereto; and
sending a second SIP Invite message containing only parameters required for SIP VOIP communication and excluding CDMA-specific parameters not required for SIP VOIP communication.

[c59] 59. The method of Claim 34, comprising:
sending a first SIP Invite message containing at least some CDMA-specific parameters not required for SIP VOIP communication;
receiving a destination address in response thereto; and
sending a second SIP Invite message containing only parameters required for SIP VOIP communication and excluding CDMA-specific parameters not required for SIP VOIP communication.